The National Center for Academic Transformation

Experts in improving learning and reducing cost in higher education.

The Learning MarketSpace, April 2009

A quarterly electronic newsletter of the National Center for Academic Transformation highlighting ongoing examples of redesigned learning environments using technology and examining issues related to their development and implementation.

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THE CAT VIEWPOINT

Offering perspectives on issues and developments at the nexus of higher education and information technology.

Please Confuse Me with the Facts

A colleague of mine recently told me about her participation in a statewide gathering of K-12 and higher education faculty and administrators. At one point, the topic of “data-driven decision-making” arose.

For those of you who are not familiar with data-driven decision-making, here's how a recent RAND Corporation occasional paper describes it: "In recent years, the education community has witnessed increased interest in data-driven decision making (DDDM)—making it a mantra of educators from the central office, to the school, to the classroom. DDDM in education refers to teachers, principals, and administrators systematically collecting and analyzing various types of data . . . to guide a range of decisions to help improve the success of students and schools. Achievement test data, in particular, play a prominent role in federal and state accountability policies. Implicit in these policies and others is a belief that data are important sources of information to guide improvement at all levels of the education system and to hold individuals and groups accountable."

My colleague was puzzled by this topic as well as by all of the discussion surrounding it. At one point, she hesitantly raised her hand and asked, "Excuse me, but what other kind of decision-making is there?"

To say that higher education is most decidedly not data-driven might be the understatement of the century. This is never more apparent than when our community is confronted with something new.

I have recently been drawn into a debate--most notably on the Inside Higher Education (IHE) web site--about the virtues of a new higher education entity called StraighterLine. StraighterLine is a new, online option for earning college credit for general education courses. A division of SMARTHINKING, the experienced and highly successful online tutoring service, StraighterLine combines online, individualized tutoring services with commercially available course content to create a set of general education courses. Students purchase these courses directly from StraighterLine and may earn credit by transfer to one of StraighterLine's partner academic institutions or to a college of the student's choice.

Why is NCAT involved? It started when Burck Smith, SMARTHINKING's CEO, posted the following to the IHE web site: "StraighterLine courses were designed using the principles of the National Center for Academic Transformation's course redesign model. These principles--that the student engage with the content rather than being lectured to, have 24/7 academic assistance, and use alternative staffing strategies to run the course--have demonstrated significant cost reductions and student outcome improvements."

Burck's point got re-stated by the editor of Inside Higher Education, Scott Jaschik. "Smith cites leading education thinkers to explain his approach to education at StraighterLine, and in particular notes the work of Carol Twigg at the National Center for Academic Transformation, which argues--just as Smith says his company does--that courses need to be redesigned and that higher education should not assume that the traditional professor model is the best way to promote learning."

Burck then went on to say, "The NCAT model and the SMARTHINKING service have both shown proven improvements in student outcomes. I will also note that the NCAT model and the StraighterLine model only really works with high-enrollment, relatively standard, general education courses."

While there are a number of inaccuracies in each of these statements, perhaps the most important one is that there is no such thing as an NCAT "model." NCAT does not have a model nor do we advocate one. In fact, we have identified six models that have emerged from the course redesigns invented by pioneering faculty and staff across the United States. Even within those six models, there are many variations in the ways in which the model is applied, depending on the particular circumstances of particular institutions. We identify practices that show increases in student learning and reductions in instructional cost and share those practices with the educational community. We hope that the number of redesign models will continue to increase.

So, while we do not have a "model," StraighterLine does. And the model is both simple and compelling.

What is StraighterLine's Model?

StraighterLine's model has three primary components:

- Courses - McGraw Hill educational materials developed by educators who have spent years thinking about how to teach introductory courses to college students (you can read about their course development process at http://onlinelearning.uvcms.com/index.php?page=our_courses_and_programs), which are used by thousands of colleges and universities.

- Tutoring - online tutoring and writing assistance provided by SMARTHINKING to students at colleges and universities. By providing tutoring online and to many institutions, SMARTHINKING improves service and provides 24/7 assistance that wouldn't otherwise be available. SMARTHINKING has hundreds of institutional clients.

- Partnerships – a growing list of institutions who have agreed to award credit for successful completion of the courses. Current partners include three for-profit institutions; Charter Oaks State College, a nontraditional college for adult students; and, Fort Hays State University (FHSU), a traditional institution of 10,000 students in Kansas.

Currently, StraighterLine offers ten general education courses: Introductory Algebra, College Algebra, Precalculus, Developmental Writing, English Composition I and II, Economics I and II, and Accounting I and II. More courses are in the pipeline.

Students can start any time they like, set their own schedules and work at their own pace.

What do these courses cost? $399 each.

Affordable, accessible, flexible, high-quality courses with on-demand assistance. What's not to like?

One would think that in a time of rising college costs, slashed budgets, laid-off faculty, furloughs, course enrollment caps, community colleges bulging at the seams, and so on, StraighterLine would be welcomed with open arms. You may be surprised to know that this is not the case. The higher education community, as illustrated by the discussion on the IHE web site, appears to be horrified by this new alternative to traditional higher education. One blogger on another site described the phenomenon as “a straighterline to higher education hell.”

Don’t Confuse Me with the Facts

Many of the objections to StraighterLine that have been raised are easy to dismiss and reflect a lack of knowledge (data-driven decision-making!) in higher education.

- Courses offered via distance learning cannot be as good as those offered face-to-face.

  Posting: “Can anyone actually tell me (with a straight face) that virtual general education classes offer the same quality as face-to-face instruction from passionate educators on the FHSU campus?”

  Distance learning is now accepted practice in higher education since just about every institution in the country offers fully online courses. This debate is over.

- Institutions should not transfer credit from non-accredited sources.

  Posting: “Is this an ‘end-run’ around accreditation?”

  Awarding credit for work done elsewhere is common and accepted in higher education since, again, just about every institution in the country allows students to bring credit to the college in a myriad of ways. This debate was resolved many years ago. Colleges routinely award credit for AP, CLEP, ACE, dual enrollment, life-skills assessment, or credit transfer from other colleges. There are also many third-party companies and programs, both for-profit and non-profit, that provide programs for which universities offer credit under their own names: Gatlin Education, Bisk Education's University Alliance, Ed2Go, Regis' New Ventures, the Institute for Professional Development, to name a few. Agreements with these entities are acknowledged by regional accreditors.

- You get what you pay for.

  Posting: “If the courses Burck Smith provides are not as good as courses taught by a qualified teacher in a classroom (as I and many of the other respondents to this article likely assume), then Mr. Smith provides a lesser product at a lesser price. You get, in other words, what you pay for, and caveat emptor applies.”

  See my comments under distance learning.

- Colleges should not out-source.

  Posting: “The outsourcing of course content, grading and teaching of required gen ed courses calls into question serious issues of academic integrity and professional ethics.”

  See my comments under transferring credit.

What does NCAT Think?

Even though I took exception to Burck’s characterization of NCAT’s planning methodology as a “model,” we do have a lot in common.

(I wasn’t too crazy about his implication that NCAT thinks full-time faculty members are not essential to ensuring high quality in higher education-–we believe they most certainly are. The issue is how their oversight is carried out in practice.)

There is no question that there is a need to reduce the cost of higher education-–that issue is unarguable-–and it is clear that StraighterLine is doing this. Because StraighterLine courses are relatively inexpensive, they provide a good option for many students. There is a clear benefit to both students and the taxpayer.

Some think that StraighterLine must do a better job in improving higher education’s dismal record with basic and remedial courses. Jaschik writes, “The theory behind StraighterLine is that many colleges have poor track records at teaching general education courses. If StraighterLine can do a better job, and selected colleges like Fort Hays grant credit, those colleges may be attractive places for the StraighterLine students to transfer to finish their degrees.”

It seems to me that alternate providers do not need to do a better job than traditional higher education; they just need to do an equivalent job. Many of our redesign projects at well-known universities have been motivated by increasing the cost-effectiveness of established high quality courses. The Virginia Tech (math), LSU (math) and Arizona State (graduate early childhood education) projects all wanted to maintain the quality of their traditional versions of the course while reducing the cost of offering them. If StraighterLine can offer courses at less cost and with more flexibility for students, they would seem to be a welcome addition to the higher education community.

So it seems to me that the only question that needs to be answered is, is the quality of StraighterLine courses as good as those offered at traditional campuses or perhaps even better?

The Need for Due Diligence (Please Confuse Me with the Facts)

Institutions considering awarding credit for StraighterLine courses need to know that the courses are equivalent in rigor to those offered at their particular college or university. They need to ascertain whether the course requires student work comparable to that at their institution--not to the university in the sky where all courses meet the Platonic ideal of the perfect course. They need to have enough information about the course to form an educated judgment about its quality and to accept the course as transfer credit. They need to do due diligence.

Posting: “I have personally seen and reviewed StraighterLine’s offerings and would stake my reputation on both their quality and rigor. I would have no hesitation to put them side-by-side in comparison with any course developed by any institution, anywhere. No, I did not "drink the Kool-Aid." I took the time to investigate both sides of the issue.”

Here are the facts

- The course objectives are available on the StraighterLine website.
- The learning materials are available on the StraighterLine web site.
- The learning activities are available on the StraighterLine web site.
- The course assessments, which match the course objectives, are available on the StraighterLine web site.
- The grading criteria are available on the StraighterLine web site.
- The point distributions that make up the final grade are available on the StraighterLine web site.

Look at them. If they meet your standards, you should consider accepting the courses as transfer credit. You should consider recommending them to your students who cannot get into the same courses on your campus. You should consider whether the quality offered by SL is better and more consistent than what you are currently offering and, if so, consider outsourcing these particular courses to StraighterLine. If they do not meet your standards, you should not do any of the above. The choice is yours. Larry Gould, provost at Fort Hays State University, took the time to look at the facts and concluded, “What is it about StraighterLine courses that provides me with a higher level of confidence about judging quality relative to, say, credentialed transfer credit from a community college or ACE? It’s simple. I know more about StraighterLine content, design, syllabi, instructors, etc. StraighterLine courses are more open and consistent than the credits that many colleges are already accepting under existing credit-transfer regimes.”

Conclusion

Students today want and demand flexibility in their educational pursuits. This flexibility includes the ability to participate anywhere at any time. Working students who cannot attend a class at 9:00 am, business people whose responsibilities take them on the road too often to consistently attend an on-campus course, servicemen and women who are never stationed at one location long enough to complete a degree, traditional-age students who need to make up a course for one reason or another—the list goes on and on.

StraighterLine courses are self-paced in that students can begin at any time and complete a course at their own pace. StraighterLine offers two payment options for students: one course at $399 or continuous enrollment at $99 per month. Thus, able students can complete a course for $99. Each course comes with up to ten hours of one-on-one live interaction with a qualified SMARTHINKING tutor (90% have a masters degree or Ph.D.) 24 hours a day, seven days a week. A student struggling in college algebra at 2:00 am can get live help within three minutes. In addition, each student is assigned a course advisor who works proactively to move them through the course.

Posting: "My Comp I course changed my life."

That’s great – I’m sure it did. But what about all of the students who failed Comp I? I can assure the reader that the latter outnumber the former. What about the students who failed to get timely feedback on their submissions? What about students who are not required to complete enough writing assignments to improve their skills due to large class size and/or instructor unwillingness to grade papers beyond a certain number? Students in StraighterLine’s English Composition I course submit eight essay drafts and six graded essays and receive personalized feedback typically within 24 hours.

And what do these courses cost? Somewhere between $99 and $399 each. Please confuse me with the facts.

--Carol A. Twigg

What's New

Featuring updates and announcements from the Center.

NCAT Celebrates Its Ten-Year Anniversary

They said it couldn’t be done. It simply wasn’t possible to improve learning while reducing costs. But in April 1999, the Center for Academic Transformation was founded to teach institutions how to improve student learning outcomes and reduce the cost of instruction through effective use of information technology with support from the Pew Charitable Trusts. At that time, the Center was affiliated with Rensselaer Polytechnic

Institute in Troy, New York. The Center flourished and moved on to become the National Center for Academic Transformation, a fully independent, not-for-profit corporation, in 2003. During its first ten years, the Center's mission has not changed. NCAT has led major national course redesign initiatives sponsored by the Trusts and by FIPSE (the Fund for the Improvement of Post-Secondary Education). Statewide initiatives are underway sponsored by the Arizona Board of Regents, the Institutes of Higher Learning in Mississippi, the State University of New York, the Tennessee Board of Regents, the Texas Higher Education Coordinating Board and the University of Maryland System.

In 2006, NCAT founded the Redesign Alliance, a membership organization whose mission is to advance the concept of course redesign throughout higher education. The Alliance pursues this mission by creating a community of higher education institutions and others who are committed to and experienced with large-scale course redesign. In March 2009, the Redesign Alliance held its third annual conference, which provided a much-needed venue for exchanging ideas and showcasing best practices.

NCAT also established a Redesign Scholars program. The 19 Redesign Scholars are experienced faculty and administrators who have implemented a large-scale course redesign, who understand the principles of course redesign and who are prepared to share their successful experiences with others who seek to achieve similar outcomes. NCAT intends to expand this program in the coming year.

Throughout all its programs, NCAT has worked closely with publishers and other corporations that support teaching and learning in higher education. Our goal is to ensure that educational institutions participating in cutting-edge course redesigns have knowledge of the best technology and best content to produce the best outcomes.

As NCAT begins its second decade, we look forward to continued partnerships with all who seek to improve student learning and reduce the cost of education. To learn more about NCAT activities or to join the Redesign Alliance, see www.theNCAT.org.

Carol Twigg Wins O'Banion Prize for Excellence in Education

Carol Twigg has received the 2009 O'Banion Prize in recognition of inspiring significant change to teaching and learning in higher education. The award was presented to Carol by the Educational Testing Service (ETS) and the League for Innovation in the Community College at the League's Innovations 2009 Conference in Reno, NV. The award recognizes the transformative work that Carol has undertaken throughout her distinguished career in education.

"In collaboration with our partners at the League for Innovation, ETS is pleased to present the 2009 O'Banion Prize to Dr. Twigg for her dedication to teaching and learning excellence," said Jon Alexiou, currently Senior Consultant for Community Colleges to the Higher Education Division at ETS and a longtime campus executive at Miami-Dade College. "Carol has been a strong advocate for community colleges and has championed our institutions and our institutional mission in her various leadership roles."

Jon described Carol as "an outstanding educator, an outstanding thought-leader and an outstanding leader" and cited the National Center for Academic Transformation for its ground-breaking work.

Named in honor of Dr. Terry O'Banion, senior fellow and president emeritus of the League for Innovation in the Community College, the award is given annually to an individual who has greatly influenced a transformation in teaching and learning or to a college that best exemplifies the ideals and characteristics of a learning college as established by O'Banion and the League.

Kudos, Carol!

Cleveland State Community College Wins Prestigious Bellwether Award

In January 2009, Cleveland State Community College (CSCC) received the prestigious Bellwether Award in Instructional Programs and Services for its highly successful redesign of developmental and college-level math courses. Featured in the January 2009 issue of *The Learning MarketSpace*, the CSCC project is part of the Tennessee Board of Regents Developmental Studies Redesign Initiative, supported by the Fund for the Improvement of Post Secondary Education (FIPSE). Using NCAT's Emporium Model, the CSCC redesign project leveraged the power of information technology to redesign three developmental and three college-level math courses with outstanding results.

The Bellwether awardees are selected by the Community College Futures Assembly, which was established in 1995. The awards are given to cutting-edge, trend-setting programs that other colleges would find worthy of replicating. The awards are given annually in three categories: Instructional Programs and Services; Planning, Governance and Finance; and Workforce Development. Each application must address one or more of the following change drivers: 1) being proactive with embedding technology, 2) defining assessment to help get new funding, or 3) collaborating with the market to deliver programs that meet future employment needs.

Congratulations, Cleveland State!

To learn more about CSCC's redesign, contact John Squires at squiresj@clevelandstate.edu or see http://www.thencat.org/States/TN/Abstracts/CSCC%20Algebra_Abstract.htm. To learn more about the Bellwether Awards, see http://www.coe.ufl.edu/futures/bellwether.html.

Isabella Hinds Assumes New Position

Isabella Hinds, who has served as NCAT's Corporate Associates program coordinator for the past two years, has accepted a new position with Follett Corporation as Director of Strategic Digital Initiatives. A long-time friend of NCAT, Isabella joined us from the recently merged Blackboard/WebCT and helped coordinate both the Center's corporate relationships as well as the Redesign Alliance Annual Conference. Carolyn Jarmon will assume Isabella's responsibilities for the Corporate Associates program. We wish Isabella success in her new position!

What Are the Cups for?

Those of you who have followed the spread of the Emporium Model across the U.S. might get a good laugh out of this one.

When Virginia Tech invented the Emporium Model in the late 1990's, they employed a decidedly low-tech solution for students to summon assistance when they got stuck on a math problem—a red paper drinking cup! Students would simply perch the cup on top of their computer monitors, and help would arrive.

As the Emporium Model spread to other institutions, so did the "cup" solution. Of course, each school changed the color of the cup (LSU uses purple and gold, for example), but the paper cup continued to be the solution of choice.

Back then, computer monitors were at least a foot in depth, so the cups balanced easily on top. Even the advent of slim monitors could not defeat the cup. Those wily math professors simply cut notches on either side of the cup so it would balance on the new monitors.

Recently, the folks at Cleveland State Community College received the following email after an article about their newly created math emporium appeared in the local paper:

> Hi there, I work at DENSO Manufacturing in Athens (TN), and my group saw the picture in the Chattanooga Times this morning of the math class from Cleveland State. We are having one hell of a guessing game as to what the blue and red cups with the sides cut out of them are used for in the photo. There seem to be two at each computer. Can you help?

After receiving CSCC's response that the students use the cups to signal if they need help or if they are testing (the blue cup is for help and the red is for testing) as well as an explanation of the notches, the emailer responded:

> Thanks, now we can all go back to work. One guy said it has to be to put the "ear phones" in to prevent the spread of germs. Another one said there were cameras on the monitors, and the cups are to cover them up. Oh, and my favorite was "mouse covers." Yea, right . . . .

CENTER CHRONICLES

Featuring initiatives to scale course redesign through state- and system-wide redesign programs.

Arizona Redesign Projects Achieve Outstanding Results

Ten projects teams have completed full implementations of their redesign plans as part of the Arizona Board of Regents Learner-Centered Education Course Redesign Initiative, six at **Arizona State University**, one at **Northern Arizona University** and three at the **University of Arizona**. A final workshop for this initiative was held on April 4, 2009 in Phoenix, AZ. Seven of the ten projects showed significant improvement in student learning, with the other three showing learning equivalent to the traditional format. All ten reduced their instructional costs. Altogether these ten redesigns impact about 22,000 students. Brief descriptions of the results are provided below, and more detailed final reports will be available on the NCAT web site by mid-summer.

ASU-Tempe redesigned **General Chemistry** using the Supplemental Model. The six traditional courses that comprise General Chemistry enroll ~2640 students each term. The six courses differ primarily in the student populations served, ranging from well-prepared science majors to non-science majors and pre-professional nursing students. In the redesigned course, online activities including homework, pre-laboratory assignments and quizzes were designed to increase students' understanding of chemistry through active learning, prompt feedback and individualized assistance. The first hour of lab was replaced with a guided problem-solving session of 66 students led by two experienced graduate teaching assistants (GTAs) or instructors. Lecture activities were modified to increase active learning and interaction among peers and instructors. The student learning results are mixed. The courses for majors showed a decrease of 4% in the DFW rate; the non-majors course DFW rate was variable, showing no trend to date. Comparing performance on common exam questions also showed mixed results; anecdotal responses of students indicated that students believe they are learning more and that they are more engaged with the content. The team continues to refine their learning measures in all six courses. A new interactive space was designed to foster student exchange and problem-solving. The staffing includes both GTAs and full-time instructors who provide consistency in the new recitation experiences. Because preparation time is reduced, each GTA can handle four lab sections instead of two, which decreased the number of GTAs needed from 101 to 79 annually. This change was particularly important because a shortage of chemistry graduate students necessitated using GTAs from other departments. The redesign reduced the overall cost of the course annually by about $842,500, a savings of about $190 per student. To learn more, contact Janet Bond-Robinson at Bond-Robinson@asu.edu.

ASU-Tempe redesigned **Computing and Information Literacy** using the Replacement Model. The traditional course used a large-lecture format and enrolled ~2200 students annually. During the redesign, the course content was changed substantially to feature problem-solving projects using conceptual models and technology tools, to allow students more interaction with peers and to focus on solving real-world problems, skills that students will continue to use in school and work. Four traditional sections offered each semester have been replaced with two types of sections, two hybrid and one online. All projects and assignments are completed and submitted online. Other online learning experiences include automated weekly assessments, guided feedback and links to a plethora of online resources. Learning increases were spectacular: in the traditional course, 26% of the students earned grades of 70 or higher, in the more difficult redesigned course, 65% of the students earned a grade of 70 or higher. The redesign reduced instructional costs by 1) changing the personnel mix by reducing the number of faculty from two faculty associates and two lecturers to one course coordinator; 2) replacing six undergraduate graders and two graduate teaching assistants (GTAs) who worked 1120 hours with one GTA and three undergraduates learning assistants who worked 480 hours; 3) increasing section size from 270 to 299, thereby maximizing classroom resources; and 4) replacing four lecture sections with two hybrid sections and one fully online section each term. Carefully designed, automated grading significantly reduced the time needed to evaluate assignments. The cost-per-student decreased from $50 to $35, a 30% reduction. To learn more, contact Toni Farley at toni@asu.edu.

Using the Replacement Model, **ASU-Tempe** redesigned **Introduction to Geology**, a course serving 2200 students annually. The redesign brought the course under a common syllabus and mastery-based assessment plan, organized content and activities into modules, and incorporated synchronous and asynchronous instructional technologies. Half of the lectures were replaced with technologically-enhanced delivery of vibrant web content, using online mastery exams with immediate feedback to students as well as ongoing support. Class time was more interactive and used to enrich, enliven, and extend the basic concepts introduced through a media-rich textbook and the web material. The average percentage of final course points for the redesigned course was 73.4%, which was higher than the 69.9% average for the traditional format. The average score on a common final exam went from 54.7% for the traditional format to 66.6% for the redesign. The team also observed a marked improvement in concept sketches constructed by students during an exam designed to demonstrate student mastery of conceptual knowledge, which they consider to be the best indication of how well students understand geological concepts and systems. The redesigned course decreased instructional costs by changing the mix of personnel teaching the course and decreasing total faculty effort by half. The cost-per-student was reduced from $92 to $68, a 26% decrease. To learn more, contact Kip Hodges at kvhodges@asu.edu.

Organizational Management and Leadership, a critical component of the business core curriculum, was the focus of a redesign at **ASU-Polytechnic**. The course serves as a foundation for upper-level business courses and enrolls ~270 students annually. Using the Replacement Model, the redesign reduced the traditional two lectures per week to one face-to-face meeting and one online class. Online activities included quizzes, small group exercises and projects focusing on chapter concepts and theories. Students submitted work via the course Blackboard site. Face-to-face sessions concentrated on providing a context for what students were discovering during the online sessions, deepening the students' knowledge of the subject matter and discussing current events relative to the topics. Student learning increased: in the traditional sections, average performance on a post-assessment was 67%, in the redesigned sections, average performance on the same assessment was 76%. Although the original plan was to increase section size from ~45 to 60 students, the size was actually increased to ~90 students, allowing enrollment to increase to 360 students annually. The cost-per-student was reduced from $373 to $154, a 59% decrease. In the future, the team anticipates offering section sizes as high as 125 to accommodate additional students, which will reduce the cost-per-student even further. To learn more, contact Roger Hutt at roger.hutt@asu.edu.

Using the Supplemental Model, **ASU-West** redesigned its offering of **Public Speaking**, a course meeting a university-wide literacy requirement and a core requirement for many majors. One of the primary goals of the redesign was to enlarge course capacity. Prior to the redesign, the course enrolled 200 students annually. The redesign tripled course capacity to 600 students through a combination of large lectures and small lab sections while achieving the same level of successful learning as in the traditional format. The redesign introduced greater consistency across sections by using a common syllabus, a common set of learning objectives and a common textbook. Student speeches and audience feedback took place in lab sections of 25 students each. Speeches were evaluated by two undergraduate learning assistants who were carefully trained and who met regularly with the lead faculty member. Students received increased feedback after giving speeches as well as individualized assistance. The redesigned course reduced the cost of offering Public Speaking from $342 to $142 per student, an estimated 58% cost reduction. To learn more, contact Meg McConnaughy at MEG.MCCONNAUGHY@asu.edu.

ASU-Tempe redesigned **Women in Society** and **Women in Contemporary Society**, two high-enrollment courses serving ~2400 students annually. In the traditional format, 18 sections were offered annually in large lectures with limited student engagement. After the redesign, only seven sections were needed. Using the Replacement Model, the redesign replaced part of the lecture time with required online student activities such as virtual field trips, low-stakes quizzing and group discussions of course topics. Student feedback was increased by the use of quizzes and an in-class personal response system. The redesigned course led to higher student engagement as they actively interacted with the material and their peers, learning to apply course concepts to real-life examples. Students had more support and access to course information 24/7. Students demonstrated increased learning: midterm and final exam grades increased across all sections of the course as did the number of course grades of A and student attendance in class. Three full-time faculty have been released to teach other courses. The university has established an undergraduate pedagogy class offered in conjunction with the redesign to train undergraduate learning assistants used in the course and give them credit for their work in the redesign. The redesign reduced the cost-per-student from $78 to $57, a 27% decrease. To learn more, contact Mary Margaret Fonow at MaryMargaret.fonow@asu.edu.

Using the Supplemental Model, **Northern Arizona University** redesigned **Introduction to Psychology**, a course serving ~1925 students annually. The redesign used an active, learner-centered approach, incorporating technology to facilitate a more individualized course experience. The team implemented an in-class student response system, required web activities and quizzes. An early intervention system targeted students who were struggling. In the redesign, team teaching gave students the opportunity to learn from faculty with the greatest expertise in a given topic area. To serve more students, the team also developed a redesigned, web-based section with an enrollment of ~100 students each term. Pre- and post-tests were used to measure learning gains. Mean performance in the large redesigned section increased from 31.2% on the pre-test to 40.2% on the post-test, the second largest increase in the history of the course. The operational cost of the course was reduced by increasing enrollment, reducing the number of sections from 11 to eight, increasing section size, and reducing the number of people teaching the course from seven to three. A full-time faculty member acted as course coordinator to facilitate student research participation and consistency across all sections. The cumulative impact of these changes decreased the cost-per-student by 30%, from $60 to $42. The cost savings were used to offer an honors section and toincrease upper level psychology offerings. To learn more, contact Michelle Miller at Michelle.Miller@nau.edu.

The **University of Arizona** redesigned **Introductory Biology**, a course in cell and molecular biology serving approximately 1800 students annually. The traditional course was taught in a typical lecture format with an additional, optional, one-hour discussion section. Using the Supplemental Model, the redesigned course included pre-class, online tutorials and mastery quizzes, allowing more student-centered activities in class. Case studies, animations, computer modeling and other materials reinforced course concepts. Small groups of students worked together to complete projects. The redesigned course was designed to be consistent across sections, emphasizing conceptual understanding and application. Learning outcomes were measured using pre- and post-tests. In the traditional sections the learning gain was 7.47% compared to 8.64% in the redesign, which is significant at the .001 level. The plan for the redesign involved reducing the number of faculty in the fall term from six to four, reducing the number of graduate teaching assistants (GTAs) and increasing the number undergraduate assistants (UGAs) who earn credit and are not paid. The fully implemented redesign reduced the number of faculty in the fall term from six to five. The changes for the GTAs and U GAs were implemented as planned. Thus, the cost-per-student has declined from $266 in the traditional course to $178 in the redesigned course (rather than the planned cost per student of $130). This is a savings of 33%. To learn more, contact Kathleen Dixon at dixonk@email.arizona.edu.

Using the Supplemental Model, the **University of Arizona** redesigned **General Chemistry**, a two-semester course sequence for science and engineering majors enrolling ~4000 students annually. In the traditional format, the lecture and laboratory were separate courses; the redesign combined them into one course. Learner-centered modules involved students in collaborative group activities during the lecture, laboratory and discussion sessions. All homework was completed and graded online using a common homework system. The redesigned course, with better alignment between all components, improved the quality of the educational experience with active, inquiry-based learning and individualized attention. Using a standardized, final exam from the American Chemical Society, students in the redesigned courses performed significantly better ($p<0.05$) than their counterparts in previous years. The average final exam grade in the redesigned first-semester course was 59.3 ± 15.1% compared to an average of 54.0 ± 16.3% in the two previous years. The average final exam grade for the redesigned second-semester course was 49.9 ± 11.6% compared to an average of 45.2 ± 7.69% in the traditional format. Comparison of the final grade distribution also showed a significant improvement in student performance. The average grade for students who passed the course increased from 67.1% in the traditional format to 70.7% in the redesigned course, in the first semester, and from 64.4% to 68.1% in the second semester. Retention in both courses has improved also. The redesigned course reduced the number of lecturers teaching the course and produced a savings of 10% (~$100,000 annually.) To learn more, contact Vicente Talanquer at vicente@email.arizona.edu.

The **University of Arizona** redesigned **A Geological Perspective**, a general education course for non-science majors, using the Replacement Model. Enrolling ~1200 students annually, the traditional course was taught in a lecture format by several different faculty members and included optional, weekly study groups taught by graduate teaching assistants (GTAs). In the redesign, optional study groups were replaced with weekly mandatory break-out sessions where small groups of students completed activities that had been introduced in the lectures. A large portion of the lecture periods in the redesign were devoted to active learning in small groups. Students submitted the majority of their work online, receiving immediate feedback. Online tutorials were also introduced. The team compared student performance on the Geosciences Concept Inventory in the traditional and redesigned sections and found no significant difference. The redesigned course reduced instructional costs by decreasing the number of GTAs from seven to four and replacing many of them with undergraduate preceptors. Preceptors were not paid but rather received academic credit for their teaching service. The number of hours spent by faculty and GTAs on preparation, class time and grading was greatly reduced. These changes reduced the cost-per-student by 58%, from $437 to $185. To learn more, contact Jessica Kapp at jkapp@email.arizona.edu.

To learn more about the Arizona Learner-Centered Education Course Redesign Initiative, see http://www.thencat.org/States/ABOR.htm or contact Maryn Boess at maryn.boess@azregents.edu.

University of Hawaii System Convenes Math Summit II

On February 21, 2009, the second in a series of math summits designed to focus on improving student success in both secondary and post-secondary mathematics was held in Honolulu, HI. The initiative is a collaborative effort among the Office of the Vice President for Academic Planning and Policy, University of Hawaii System; the Office of the Vice President for Community Colleges, University of Hawaii System; Hawaii P-20 Partnerships for Education; and the Hawaii Department of Education. Summit attendees included faculty and administrators at the high school and college level. As one of two keynote speakers, Carol Twigg spoke to the

participants about the successes achieved across the country by those redesigning math courses. The second keynote speaker, Uri Treisman from the Dana Center at the University of Texas at Austin, discussed possible causes of the math crisis and provided other examples of best practices that might address it. Carol also conducted a session for administrators from UH community colleges and universities about their role in a potential course redesign project.

On the day before the summit, Carol and Carolyn Jarmon met with a task force made up of faculty from multiple UH community colleges to discuss examples of NCAT projects that have successfully addressed the specific challenges found in developmental math. Carolyn met again with this group on February 21st to continue the discussion. For more information about the Hawaii Math Summits, contact Hae Okimoto at Hae@hawaii.edu or see http://www.hawaii.edu/mathsummit/.

Mississippi Community and Junior Colleges Course Redesign Workshop

On May 5, 2009, representatives of the 15 community and junior colleges in Mississippi will gather in Jackson, MS for an orientation to course redesign, co-sponsored by the Mississippi Institutions of Higher Learning and the Mississippi State Board of Community and Junior Colleges with support from Lumina Foundation for Education. Carol Twigg and Carolyn Jarmon will conduct the workshop, which will focus on redesigning developmental math courses. We will be joined by John Squires, math department chair at Cleveland State Community College (CSCC) in Cleveland, TN, who will discuss the highly successful redesign of developmental and college math courses at CSCC. Participants will learn about the potential of course redesign to improve student learning and reduce instructional costs and explore the challenges they may face as they think more concretely about implementing a redesign at their campuses. This workshop is part of a year-long planning process supported by Lumina to address the pervasive issue of high failure rates of students in developmental math. To learn more, contact Fiona Qualls, Associate Executive Director, Mississippi State Board for Community and Junior Colleges, at fqualls@sbcjc.cc.ms.us.

State and Systemwide Workshops Planned for the Spring

Spring is the time to report the outcomes achieved in either pilot or full implementations of the redesigns that are part of four NCAT state and systemwide course initiatives. Workshops that will bring redesign teams together have been scheduled for each initiative in May or June. We will include summaries of the outcomes in the July 2009 issue of *The Learning MarketSpace.*

The **University System of Maryland** is in the final stages of the Maryland Course Redesign Initiative (MCRI). Project teams will report on the outcomes achieved during the fall 2008 full implementations of their redesigns at a workshop on May 29, 2009, in Baltimore, MD. The participating institutions and the course they have redesigned are: **Coppin State University**: Beginning and Intermediate Algebra; **Frostburg State University**: General Psychology; **University of Maryland, Baltimore County**: Introduction to Psychology; **Salisbury University**: Biology; **Towson University**: Developmental Math; **University of Baltimore**: Writing; **University of Maryland, College Park**: Social Psychology; **University of Maryland Eastern Shore**: Principles of Chemistry; **University of Maryland School of Nursing**, **Baltimore**: Context of Health Care Delivery; and **University of Maryland University College**: Concepts of Biology. To learn more, contact Donald Spicer at dspicer@usmd.edu or Nancy Shapiro at nshapiro@usmd.edu or see http://www.thencat.org/States/USM/USM%20Project%20Descriptions.htm.

On June 5, 2009, the **State University of New York** will host eight redesign teams in a workshop in Syracuse, NY, as they report on the outcomes of their pilot implementations. The institutions and the course they have redesigned are **Buffalo State College**: The Economic System; **SUNY Canton**: Introduction to Biology; **SUNY Fredonia**: First-Year Spanish; **Niagara County Community College:** Introduction to Statistics; **SUNY College at Old Westbury**: College Algebra; **SUNY at Oswego**: College Algebra; **SUNY at Potsdam**: European and US History; and **Stony Brook University**: Physics for Life Sciences. To learn more, contact Harold Silverman at Harold.Silverman@suny.edu or see http://www.thencat.org/States/NY/SUNY%20Project%20Descriptions.htm.

The final workshop for the **Tennessee Board of Regents** Developmental Studies Redesign Initiative will occur in Nashville, TN on June 11, 2009. Six projects will report on their final implementation of their redesign projects. Four projects are in developmental math at **Austin Peay State University**, **Chattanooga State Technical Community College**, **Cleveland State Community College** and **Jackson State Community College**. Team members from **Northeast State Technical Community College** will report on their redesign of developmental reading, and those from **Columbia State Community College** will describe the outcomes achieved by their redesign of developmental reading and writing. To learn more, contact Treva Berryman at Treva.Berryman@tbr.edu or see http://www.thencat.org/States/TN/TN%20Project%20Descriptions.htm.

On June 22 and 23, 2009, the **Mississippi Institutions of Higher Learning** (IHL) will host a mid-course sharing workshop in Jackson, MS. The IHL teams reporting outcomes from pilot implementations of their redesigns are: **Alcorn State University**: College Algebra; **Delta State University**: College Algebra; **Jackson State University**: Intermediate Algebra and College Algebra; **Mississippi State University**: Biology, Introduction to Statistics, Statics and Survey of Chemistry; **Mississippi University for Women**: Intermediate Algebra and College Algebra; **Mississippi Valley State University**: Intermediate Algebra; **The University of Mississippi**: Business Calculus; **The University of Southern Mississippi**: First-Year Spanish, General Psychology, Intermediate Algebra, Introduction to Computing, Nutrition and Food Systems, and Technical Writing. To learn more, contact Alfred Rankins at arankins@mississippi.edu or see http://www.thencat.org/States/MS.htm.

COLLEAGUES COMMITTED TO REDESIGN (C^2R)

Featuring progress reports and outcomes achieved by the C²R program.

C²R Round II Pilots Completed

The second round of the Colleagues Committed to Redesign program (C²R) has concluded. The institutions conducted pilots of their redesigns during fall 2008 and reported on the outcomes achieved at the Third Annual Redesign Alliance Conference in March 2009. The results are extremely promising. All teams intend to move or have already moved to full implementation. Pilot outcomes for C²R Round III are summarized below.

Arizona State University has completed a pilot redesign of Emergent Literacy, a required course for state certification in early childhood education. The course's annual enrollment of ~100 students is spread over three campuses. The goals of the redesign were to serve a projected enrollment growth of 300-500 students as well as provide access to certification for practitioners living and working in rural areas in a fully online course while maintaining the high quality of the face-to-face course. The redesigned course combined all sections into one large, fully online section, available to students on all ASU campuses. The team found that students in both the traditional and redesigned formats performed the same on individual course assignments and on the overall course. Duplication of effort and inconsistencies across campuses were eliminated. By creating a single, online section led by one faculty member, the reduction in the instructional costs for the fully implemented course will make it possible for two full-time faculty members to teach other courses in the degree program. The redesign of Emergent Literacy will serve as the model to redesign all 14 of the courses that comprise the Master's degree in Early Childhood Education. To learn more, contact Nancy Perry at Nancy.Perry@asu.edu.

Auburn University has completed a pilot redesign of Pre-Calculus Algebra, which enrolls ~1000 students annually. The proportion of students who achieved minimum competency on the final exam (a C or higher) was significantly higher in the redesigned sections than in the traditional format (78.1% vs. 65.6%). The failure rate for the traditional sections was 7.8% compared with 4.9% for the redesigned sections. The quality of student learning has been improved through an active learning environment which allows students to work at their own rates with immediate feedback on their online work. Students in the redesigned sections also completed the entire syllabus, covering more material than those in the traditional sections. When the course redesign is fully implemented in fall 2009, changing the personnel mix will reduce instructional costs by 23%. Once a new classroom building is completed, section sizes will be increased, thus freeing up some faculty to teach upper-level courses and increasing the number of GTAs who can teach small sections of other math courses. Given the success of the pilot redesign, the entire course as well as two additional courses, College Algebra and Pre-Calculus Trigonometry, will be redesigned. To learn more, contact Michel Smith at smith01@auburn.edu.

Auburn University has completed a pilot redesign of Engineering Physics, which enrolls ~750 students annually. The goals of the redesign were to reduce an unacceptably high failure rate and move the course from a faculty-centered, passive-student environment to a student-centered, active learning environment. Learning in the redesigned course was significantly improved. The exams were divided into content items requiring both mastery of basic concepts and higher order thinking skills. In six of the eight content items, redesign students outperformed students in the traditional course: in two items students by 4%; in three items by 8%; and in one item by 16%. There was no significant difference in the course completion rate. The student-centered environment and redesigned format improved class attendance and achieved consistency in content, assignments and grading for all students. The quality of student learning was enhanced with an inquiry-based curriculum, collaborative learning activities, and immediate feedback on assignments. The anticipated cost savings were achieved by redesigning the lab experience and adjusting the manner in which GTAs were assigned. When the redesign is fully implemented, faculty will be freed to teach other upper-level courses. To learn more, contact Marllin Simon at msimon@physics.auburn.edu.

New York Institute of Technology has completed a pilot redesign of Introduction to Psychology, a course enrolling ~835 students annually. The goals of the redesign were to standardize content, requirements and delivery for all students as well as create an active learning environment. Peer tutors, in-class activities, small group discussions and mastery quizzes engaged the students' interest and their active participation in learning. In the pilot, student success rates were comparable to the traditional format. Given the findings, NYIT plans to re-pilot the redesign with a few changes such as requiring students to attend a review session if they are not making satisfactory progress. The same professor will teach both the traditional and redesigned sections. This will change the timeline for full implementation on the Old Westbury campus from fall 2009 to spring 2010. Planned cost savings will occur then when sections are reduced from 17 to 10 and section size is increased by ~30 students at the Old Westbury campus and by 10 - 40 at the Manhattan campus. To learn more, contact Spencer Turkel at sturkel@nyit.edu.

Oklahoma State University has completed a pilot redesign of College Algebra, which enrolls ~2000 students annually. The purpose of the redesign was to provide a consistent learning experience for all students and improve the success rate. The redesign improved learning outcomes. The mean final exam score in the traditional sections was 78.4% compared with 80.2% in the redesigned sections. The retention rate also improved, increasing to 76.3% from 70.5%. Students in the redesigned sections had comparable experiences with the same content, similar assignments and uniform grading standards. The quality of student learning has been enhanced by students actively working on mathematics, participating in small focus groups and receiving immediate feedback on homework and quizzes. Progress monitoring and individual assistance kept the students more connected to the course. Projected cost savings will be realized with full implementation of the redesign when the total number of students per instructor will increase from 100 to 140, thereby reducing the number of instructors from 20 to 15. To learn more, contact Cynthia Francisco at Cynthia@math.okstate.edu.

Southeastern Louisiana University has completed a full implementation of its redesign of Intermediate Algebra, a course enrolling ~1200 students annually. The two goals of the redesign were to improve the

retention/completion rate and prepare to accommodate a projected enrollment increase of ~400 students. The redesign significantly increased the retention rate from 61.7% to 71.8%. The online components engaged students and gave them immediate feedback on their performance. Students recognized that even if they were probably not going to pass the course, they were learning the material through the software and would be more likely to pass the next time they took the course. Although students performed at virtually an identical level on final course grades with 32% passing, students in the redesigned sections had to perform at a higher level to achieve the same score as they did not receive any partial credit. The quality of student learning was enhanced by one-on-one instruction in the lab. Anticipated cost savings were achieved by increasing pilot section size from 32 to 36 students and reducing the number of faculty teaching the course. The redesign model has been implemented for a three-hour version of College Algebra, and the department plans to use a modified version for a five-hour College Algebra course. The university is considering how to implement redesign in other disciplines. To learn more, contact Rebecca Muller at bmuller@selu.edu.

The **University of Central Florida** (UCF) has completed a pilot redesign of College Algebra, which enrolls ~4100 students. The purpose of the redesign was to increase student success rates and to serve a large student population with decreased funds and available instructional personnel. The redesign significantly improved the success rates. Students in the redesigned sections achieved a mean score of 80.59% on the common final exam as contrasted with the mean score of 63.3% by students in traditional sections. The proportion of students who successfully completed the course with a C or better was significantly higher in the redesigned sections (74% vs. 65%). Prior to the redesign, the whole course had an 8.4% withdrawal rate which improved to 7.2% for the redesigned sections. Students in the redesigned sections were active and engaged learners, spending more time doing math rather than observing it. Their learning was enhanced by individual study plans to accommodate learning styles and abilities, flexible scheduling, immediate and automated feedback, and on-demand assistance in the lab. UCF planned to reduce the cost-per-student by changing the mix of personnel, decreasing the annual number of sections from 65 to 13 and increasing section size. Cost savings will be achieved with full implementation, although they will be slightly lower than initial projections. The department is planning to redesign additional mathematics courses, and other departments are exploring the feasibility of redesigning their introductory courses based on the NCAT methodology. To learn more, contact Tammy Muhs at tmuhs@mail.ucf.edu.

The **University of West Alabama** has completed a pilot redesign of Written English, a course enrolling ~475 students annually. The goals of the redesign were to improve student performance and decrease the consistently high failure rate. Student learning was enhanced by moving grammar and mechanical exercises online with immediate feedback. The standard rhetoric/reader for the course was replaced by topical essays from publications, challenging students with readings that typically moved beyond the level expected in the traditional course. Students were allowed to revise their essays through multiple drafts with ongoing review and feedback from the lead instructor, peer reviewers and the lab assistant. Significant improvement occurred in the form and content of both the diagnostic and final essays. Student grammar skills were strengthened, and the final essays were longer, more specific, and more logically organized in the pilot sections. The failure rates in the redesigned sections were 24% and 11% versus 47.5% and 52% in the traditional sections. The average failure rate for the two pilot sections was 17.5%, well below the four-year course average of 36+%. Cost savings were anticipated through greater instructional efficiency associated with changing the mix of personnel, increasing section size from 25 to 30 and decreasing the annual number of sections from 19 to 16. Savings were achieved and will increase with full implementation, which is projected for fall 2010. To learn more, contact Tim Edwards at tedwards@uwa.edu.

Project abstracts, final progress reports and contact information for each Round II C^2R project are available at www.thencat.org/RedesignAlliance/C2R/Rd2ProjDesc.htm.

C^2R Round III Institutions Finalized

The institutions selected to participate in Round III of NCAT's Colleagues Committed to Redesign (C^2R) program have been finalized. After the initial participant list was reported in the January 2009 issue of *The Learning MarketSpace*, Arizona State University had to withdraw because of budgetary issues, and another institution, Morehead State University in Kentucky, was added to the group. The final list of Round III schools is: **Coppin State University**: Technology Fluency, **Edison State College**: Reading, **El Paso Community College**: Intermediate Algebra, **Morehead State University**: College Algebra, **Regis University**: Essentials of Writing, **Santa Fe College**: Intermediate Algebra, **University of Maryland Eastern Shore**: Biology, **University of Minnesota**: Introduction to Psychology, **University of North Carolina, Charlotte**: Spanish, and **University of Washington Bothell**: Pre-Calculus.

C^2R Round III Teams Gather for the Disciplinary Institutes

On April 24, 2009, the redesign teams participating in Round III of the Colleagues Committed to Redesign gathered with NCAT staff and the Redesign Scholars in Dallas, TX for the C^2R Disciplinary Institutes to learn more about course redesign and to share their preliminary redesign plans. During February and March 2009, redesign teams collected institutional data regarding learning outcomes and costs. At the Institutes, teams presented their choice of redesign model and how their redesign embodies NCAT's Five Principles of Successful Redesign. After each presentation, the team received feedback from other teams in their disciplines and from the Redesign Scholars, who offered suggestions and guidance based on their own experience in redesign. Also participating were representatives of NCAT's Corporate Associates. Teams will submit their final course redesign plans on June 1, 2009, and will pilot their redesigns in fall 2009. To learn more about the C^2R program, see http://www.thencat.org/RedesignAlliance/DissemProgram.htm.

THE REDESIGN ALLIANCE

Featuring updates from the Alliance, a member organization of institutions, organizations and companies committed to and experienced with large-scale course redesign.

The Third Annual Redesign Alliance Conference – A Huge Success!

On March 22-24, 2009, more than 300 faculty members, academic administrators, technology experts and corporate participants gathered in Orlando, FL to advance their knowledge of course redesign. The conference began with an orientation session for those new to course redesign to learn how best to take advantage of the conference program. An opening reception on Sunday evening gave participants the opportunity to meet and greet other Redesign Alliance members and begin the valuable networking experiences the conference offers as well as to take advantage of the corporate exhibits available in the Exhibit Hall. Many participants ended their first day by visiting the corporate hospitality suites throughout the hotel for more substantive and detailed conversations and demonstrations.

The conference began on Monday morning with a keynote address by Philip Parsons Director, Sasaki Strategies, entitled “Learning Space Design: Changing the Environments in Which We Teach and Learn.” Following the opening plenary, attendees participated in one of seven disciplinary showcase sessions in the academic areas of humanities, natural sciences, social sciences and the quantitative fields. These sessions allowed attendees to learn from those who have completed a full course redesign and discuss specific issues and challenges related to their particular academic areas.

Monday afternoon provided additional opportunities for discussion within the disciplinary clusters. Led by NCAT’s Redesign Scholars, the sessions allowed participants to further investigate the process of redesign and learn from a number of project leaders who are in the midst of a pilot redesign implementation and who are currently dealing with a range of issues. Each presenter was asked to select three challenges from a list of eight and describe how they are working through them. A special session for academic administrators was also held, attracting more than 60 participants.

The theme of learning space design was carried forward in a second plenary session late Monday afternoon. A panel of course redesign leaders discussed the impact of their redesigns on campus space, how they developed support for the needed changes and how new spaces are serving the learning needs of their students.

After the Monday afternoon plenary, 15 poster sessions were held adjacent to a second reception, allowing conference participants to eat, drink and learn at the same time. Poster sessions highlighted the innovative ways institutions are approaching course redesign and allowed one-on-one discussion between attendees and presenters. The poster sessions provided a venue for exploration of more focused topics related to redesign and to feature those who have done significant work in these areas.

Tuesday morning included concurrent sessions focused on Hot Topics in Course Redesign such as how to engage students, new models for fully online courses, assessment planning and working with commercial software. These topics were identified by members of the Redesign Alliance as those they were most interested in discussing. Each session was kicked off by those who have experienced success in relation to the topic and included discussion among the participants. The closing plenary panel on Tuesday morning featured the results of a national study led by a team at Washington University in St. Louis that demonstrates how quizzing, if done correctly, also can sharply improve long-term retention of unfamiliar knowledge.

Throughout the conference, corporate members of the Alliance sponsored hospitality suites where attendees could learn about various products and services that can be used in course redesign. These suites were overrun by participants, indicating a high level of interest. Corporate participants included Blackboard, Cengage Learning, Hawkes Learning, McGraw Hill Higher Education, Pearson Education and SMARTHINKING.

Comments from participants at this conference were even more positive than at the last two. As one participant noted, “This conference was the best yet. People were further along in their thinking and more open to new ideas.” It is clear that more institutions in more academic fields are engaged in the process of course redesign. These comments were echoed by the Redesign Alliance Advisory Board, which met on Tuesday afternoon after the close of the Annual Conference. Attendees left the conference energized and ready to move forward on their redesign ideas.

As plans for the Fourth Annual Redesign Alliance Conference unfold, we will keep you posted. We look forward to seeing you in Orlando next year!

To join the Redesign Alliance, see http://www.thencat.org/RA.htm.

Conference Presentation Slides and Projects Links Now Available on NCAT Web Site

Slides from the 2009 Redesign Alliance Conference presentations are available on the NCAT web site at http://www.thencat.org/RedesignAlliance/Agenda09.htm linked to each presenter on the agenda. (Click on the name of the presenter.) To learn more about the speakers’ redesign projects, click on the speaker’s institution name listed on the agenda. The institution’s name is linked to an abstract of the presenter’s redesign project, which includes contact information so that it is possible to have additional conversations.

Five New Members Join The Redesign Alliance

NCAT welcomes five new institutional and corporate members of the Redesign Alliance, all of which seek to join a growing community of faculty and administrators interested in harnessing the power of information technology to improve student learning and reduce instructional costs. The new members are **Bedford, Freeman and Worth Publishing**; **Florida Community College at Jacksonville**; **Mississippi Institutions of Higher Learning**; **Seminole Community College**; and, the **University of Minnesota.** These new members reflect the Alliance's key constituencies: community colleges, four-year institutions, state and system organizations, and higher education corporations. To learn more about membership in the Redesign Alliance, see http://www.thencat.org/RA.htm or contact Kay Katzer, Membership Coordinator, at kkatzer@theNCAT.org.

CORPORATE CONNECTIONS

Linking content and software providers with leading edge institutions.

Using Blackboard to Support Successful Course Redesign

Hot off the heels of NCAT's Redesign Alliance Conference, Blackboard ® (www.blackboard.com) is excited to share some of the great conversations that were had during the sessions and in their hospitality suite, where attendees of the conference (no matter what their learning platform) gathered with the Blackboard team and one another.

As a pre-conference workshop, Melissa Anderson, Blackboard's Director of Solutions Engineering, met with a small group of attendees currently in the pilot stage of their redesign projects to discuss how Blackboard tools and partners can enable project success. Focused on three of NCAT's Five Principles of Successful Course Redesign, the group discussed ideas on how to manage multiple course sections efficiently, encourage active learning and promptly assess student and course performance. The group also learned how to best utilize some of the latest features and functions of the Blackboard environment (Release 9) such as expanded group management tools, self and peer assessment tools, and notification dashboards. (See an introduction to Blackboard Learn™ Release 9 here.) Overall, the group left with ideas shared and questions answered about how best to capitalize on their already established Blackboard licenses at their various institutions. To learn more or to acquire materials from this workshop, contact Lesley Lightfoot at lesley.lightfoot@blackboard.com.

Pearson Education Plans Fall Workshop on Course Redesign

Building on a highly successful fall 2008 workshop and strong interest at the Redesign Alliance Conference in Orlando last month, Pearson Education is planning its sixth annual workshop on course redesign at the Fontainebleau Miami Beach on September 25-26, 2009. Participants will learn how to get started on course redesign from NCAT's Carolyn Jarmon and from large- and small-group interaction with experienced educators in math, science, economics, accounting, English composition, developmental reading and writing, and world languages. Online registration for the event is now open, and early registration rates are available at http://www.pearsoncourseredesign.com/events.html

If you need an access code or more information about any of the 58 Pearson MyLabs and Mastering Science products seen at the Redesign Alliance Conference, visit www.pearsonhighered.com or contact Karen Mullane at karen.mullane@pearson.com.

COMMON GROUND

Reporting on initiatives that share the Center's goals and objectives.

Lumina Issues Report on Developmental Education

Lumina Foundation for Education recently issued a new report on developmental education, entitled *Remediation Redux*, to raise awareness of campus efforts to improve student success. The report explores the status of developmental education across the United States and provides examples of effective programs underway to address the low student success rates. Among the institutions featured is **Austin Peay State University** (APSU). APSU no longer offers remedial and developmental math courses but rather links workshops which provide just-in-time remediation to college-level math courses. The APSU redesign has shown promising results with this new approach. To read the entire report, see http://www.luminafoundation.org/publications/focus_archive/fall_2008/Focus_Fall_2008.pdf. To learn more about the APSU redesign, contact Harriett McQueen at McQueenh@apsu.edu or see http://www.thencat.org/States/TN/Abstracts/APSU%20Algebra_Abstract.htm.

NCHEMS Information Center

The National Center for Higher Education Management (NCHEMS) has developed an Information Center for State Higher Education Policymaking and Analysis, which provides one-stop shopping for higher education data and information. The mission of the NCHEMS Information Center is to provide state policymakers and analysts timely and accurate data and information that are useful in making sound higher education policy decisions. To achieve this mission, the Center provides updated information with supporting data free of charge and identifies data gaps which need to be closed in order to make the information more useful. For each measure reported on the Information Center's web site, there are links to additional sites and other sources that help the user apply the information in the context of policymaking. To learn more about this valuable resource, see http://www.higheredinfo.org/.

Using NSSE and CCSSE Data to Measure the Impact of Course Redesign

At the Second Annual Redesign Alliance Conference in March 2008, George Kuh of the National Survey of Student Engagement (NSSE) and Kay McClenney of the Community College Survey of Student Engagement (CCSSE) provided an overview of the goals and outcomes of these surveys and how they can be used most effectively. Now administered by about 1200 institutions across the United States, these surveys provide valuable information to institutions about students' perspectives on their campus experiences.

Because many institutions that are engaged in course redesign have also been using either NSSE or CCSSE for several years, it seems that these surveys could provide good information to inform the redesign. While all schools sample, institutions which are redesigning particular courses should consider over-sampling so that all students involved in the redesign could be included. Then comparisons can be made regarding various aspects of engagement between those students who are part of a redesign and those who are not. In addition, institutions involved in a redesign might consider adding questions specifically about the redesign, as appropriate, to collect as much useful data as possible.

To learn more about NSSE, contact Alexander McCormick at amcc@indiana.edu or see http://nsse.iub.edu/redirect.cfm. To learn more about CCSSE, contact Kay McClenney at kmcclenney@ccsse.org or see http://www.ccsse.org/.

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